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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/510,505	10/07/2004	Naoki Okamoto	1254-0261PUS1	6898

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EXAMINER	
NGUYEN, SIMON	
ART UNIT	**PAPER NUMBER**
2618	

NOTIFICATION DATE	DELIVERY MODE
06/18/2007	ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

mailroom@bskb.com

Office Action Summary	Application No.	Applicant(s)	
	10/510,505	OKAMOTO ET AL.	
	Examiner	Art Unit	
	SIMON D. NGUYEN	2618	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *22 March 2007*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1,4,6,8-17 and 21* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1,4,6,8-10,13-17 and 21* is/are rejected.

7)☒ Claim(s) *11 and 12* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 112

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claim 13 recites the limitation " the transmission power value" in "an output adjusting circuit for adjusting the transmission power value on individual received each sub-carrier unit basis". There is insufficient antecedent basis for this limitation in the claim.

Furthermore, the whole claim 13 seems to be mismatched with independent claim 1.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

4. Claims 1, 4, 6, 8-10, 14-17, 21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hashem et al. (2006/0126493) in view of MacLellan et al. (5,940,006).

Regarding claim 1, Hashem discloses a radio communication system using a multiple sub-carrier modulation method (for example, QAM, QPSK, paragraph 3), the

radio communication system comprising at least a first and a second radio station (fig.1), wherein the second radio station (base station 10) selects only those sub-carriers capable of providing a transmission rate not less than a predetermined value in said first radio station (remote unit 16), on the basis of the reception conditions of each sub-carrier of said first radio station (for example, the base station transmits a plurality of sub-carriers to the remote unit, wherein the remote unit measures the S/I of each sub-carrier signal to determined which sub-carriers are acceptable sub-carriers, then the remote unit transmits a return signal to the base station, wherein the return signal includes the average S/I of acceptable sub-carriers and a sequence of numbers acceptable sub-carrier (paragraphs 19-23), wherein the base station receives the return signal, selects first acceptable sub-carriers (step 128,130 of fig.4), encodes (modulates) the selected acceptable sub-carriers, and transmit them to the remote unit (paragraphs 25, fig.4), wherein the modulation of the selected sub-carriers using a modulation level or a coding rate in accordance with the reception conditions of said sub-carriers ((paragraphs 3, 19). It should be noted that Hashem discloses the communication as a OFDM (paragraph 6) wherein the OFDM uses a TDMA technique for communication is know to those skilled in the art. However, Hashem does not specifically disclose so.

MacLellan discloses a TDMA/OFDM communication system between a tag (remote unit) and an interrogator (a base station), comprising: selecting a sub-carrier and modulates the selected sub-carrier using a different modulation protocol (column 11 lines 31-50. therefore, it would have been obvious to one skilled in the art at the time the

invention was made to have Hashem, modified by MacLellan in order to have a reliable, secure, low cost system as well as to meet a system performance requirement.

Regarding claims 4, 6, these claims are rejected for the same reason as set forth in claim 1, wherein Hashem discloses a first radio station is a mobile station and a second radio station is a base station (fig.1).

Regarding claims 8-9, Hashem further discloses a smaller modulation level or coding rate or a different link mode is allotted based on S/I, power between the base and the remote unit (paragraphs 3, 19, 25, 28). It should be noted that the changing in modulation level or coding rate also bases on distance because a farer distance, more noise will generate in the link, which is known to those skilled in the art.

Regarding claim 10, Hashem further discloses the base station calculating a transmission rate in accordance with the remote unit (paragraphs 31). It should be noted that even though Hashem does not specifically disclose calculating the transmission rate between a different base station, a different remote unit, and a different cell area, however, for the system as taught by Hashem, the transmission rate constantly change between a different cell area, a different BS, and a different remote unit is known to those skilled in the art.

Regarding claims 14-16, Hashem further discloses the base station supports a plurality of transmission rates including a maximum transmission rate (optimum link mode), which is transmitted to the remote unit (paragraphs 3, 19, 25, 28).

Regarding claim 17, this claim is rejected for the same reason as set forth in claim 1.

Regarding claim 21, this claim is rejected for the same reason as set forth in claims 4, 6.

5. Claim 13 is rejected under 35 U.S.C. 103(a) as being unpatentable over Hashem et al. (2006/0126493) in view of MacLellan et al. (5,940,006) as applied to claim 1, and further in view of Li et al. (2002/0159422).

Regarding claim 13, the modified Hashem, Hashem further discloses adjusting the transmission parameter, which means including the transmission power (paragraph 3, 19), which is known to those skilled in the art. However, Hashem fails to say so.

Li, in the same field of invention, discloses the transmitter adjusting the transmission power of each subcarrier (paragraph 74). Therefore, it would have been obvious to one skilled in the art at the time the invention was made to have modified Hashem, modified by Li in order to improve the system performance.

Allowable Subject Matter

6. Claims 11-12 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Regarding claims 11-12, the prior art of record fails to teach storing information on each received sub-carrier ranked on the bases of the reception power and wherein the transmission is performed in descending order of reception power in accordance with the ranking.

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Simon Nguyen whose telephone number is (571) 272-7894. The examiner can normally be reached on Monday-Friday from 7:00 AM to 4:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Edward F. Urban, can be reached on (571) 272-7899.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group receptionist whose telephone number is (703) 306-0377.

Any response to this action should be mailed to:

Commissioner of Patents and Trademarks

600 Dulany, Alexandria, VA 22314

Or faxed to:

(571) 273-8300 (for formal communications intended for entry)

Hand-delivered response should be brought to Customer Service Window located at the Randolph Building, 401 Dulany, Alexandria, VA, 22314.

Simon Nguyen

June 9, 2007

SIMON NGUYEN
PRIMARY EXAMINER